Micro Commercial Components
21201 Itasca Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

# FST12020 THRU FST120100

## 120 Amp Schottky Barrier Rectifier 20 to 100 Volts

## Features

- Metal of siliconrectifier, majonty carrier conducton
- Guard ring for transient protection
- Low power loss high efficiency
- High surge capacity, High current capability

## Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

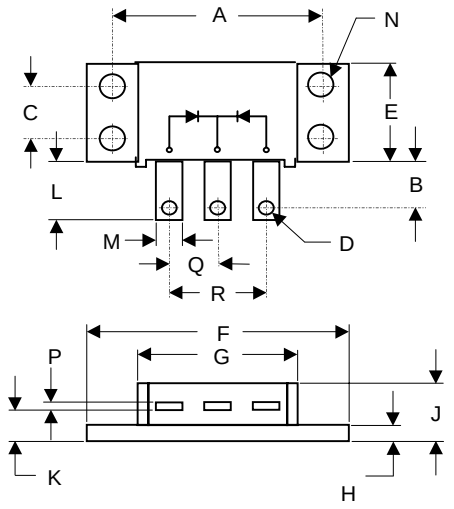
| MCC Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|---|---|---|---|
| FST12020 | 20V | 14V | 20V |
| FST12030 | 30V | 21V | 30V |
| FST12035 | 35V | 24.5V | 35V |
| FST12040 | 40V | 28V | 40V |
| FST12045 | 45V | 31.5V | 45V |
| FST12060 | 60V | 42V | 60V |
| FST12080 | 80V | 56V | 80V |
| FST120100 | 100V | 70V | 100V |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|---|---|---|
| Average Forward Current | $I_{F(AV)}$ | 120 A | $T_A$ = 135°C |
| Peak Forward Surge Current | $I_{FSM}$ | 1200A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage<br>FST12020-12045<br>FST12060<br>FST12080-120100 | $V_F$ | <br>.63 V<br>.75 V<br>.84 V | $I_{FM}$ = 60.0A;<br>$T_A$ = 25°C |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$ | 2 mA | $T_A$ = 25°C |
| Typical Junction Capacitance | $C_J$ | 340pF | Measured at 1.0MHz, $V_R$=4.0V |

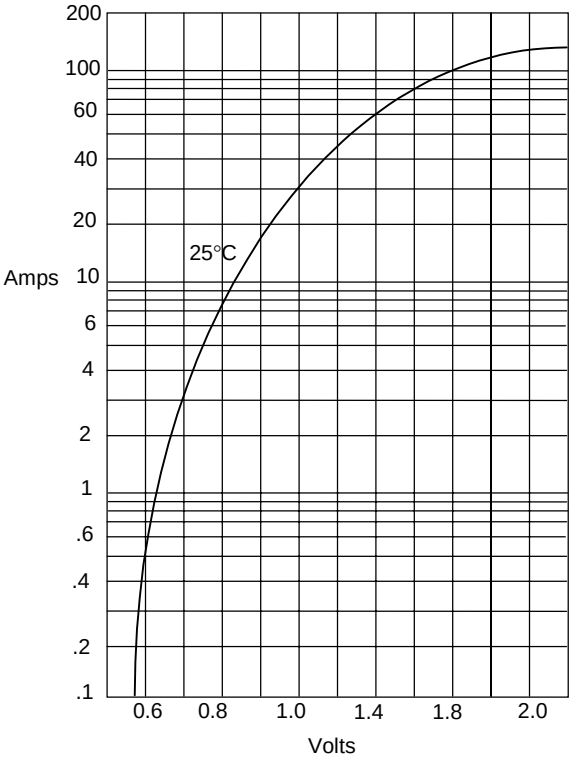
*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

## POWERMOD



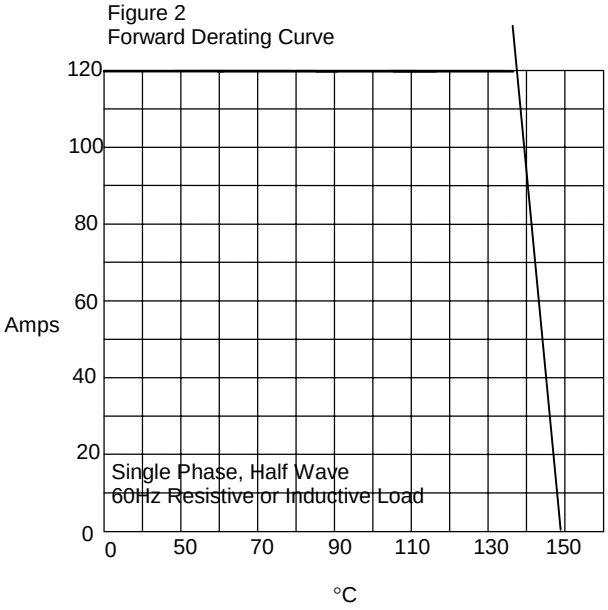

| DIM | INCHES MIN | INCHES MAX | MM MIN | MM MAX | NOTE |
|---|---|---|---|---|---|
| A | 1.995 | 2.005 | 50.67 | 50.93 | |
| B | .330 | .325 | 7.62 | 8.26 | |
| C | .495 | .505 | 12.57 | 12.83 | |
| D | .182 | .192 | 4.62 | 4.88 | |
| E | .990 | 1.010 | 25.12 | 26.65 | |
| F | 1.490 | 1.510 | 37.85 | 38.35 | |
| G | 1.500 | 1.525 | 38.10 | 38.70 | |
| H | .120 | .130 | 3.05 | 3.30 | |
| J | ------ | .400 | ------ | 10.16 | |
| K | .240 | .260 | 6.10 | 6.60 | |
| L | .490 | .510 | 12.45 | 12.95 | |
| M | .330 | .350 | 8.38 | 6.90 | |
| N | .175 | .195 | 4.45 | 4.95 | ∅ |
| P | .035 | .045 | 0.89 | 1.14 | |
| Q | .445 | .455 | 11.30 | 11.56 | |
| R | .890 | .910 | 22.61 | 23.11 | |

Figure 1
Typical Forward Characteristics



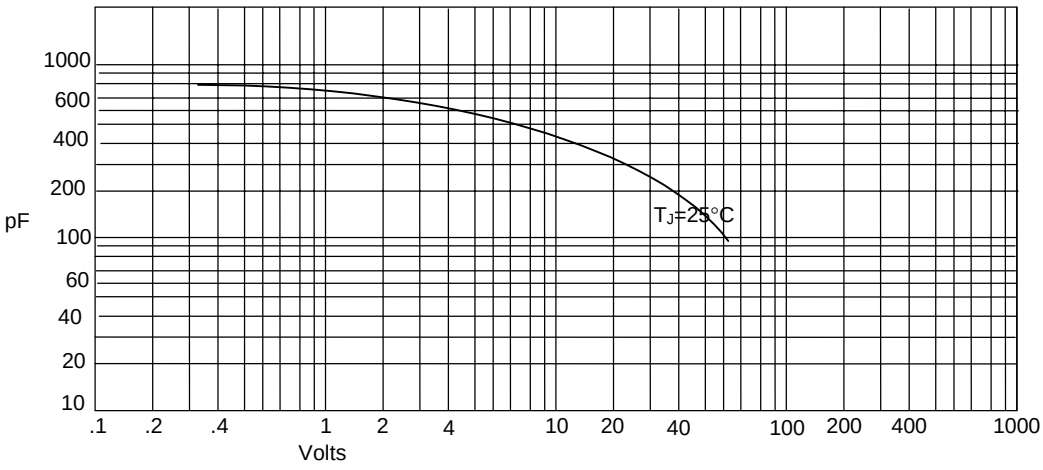

Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



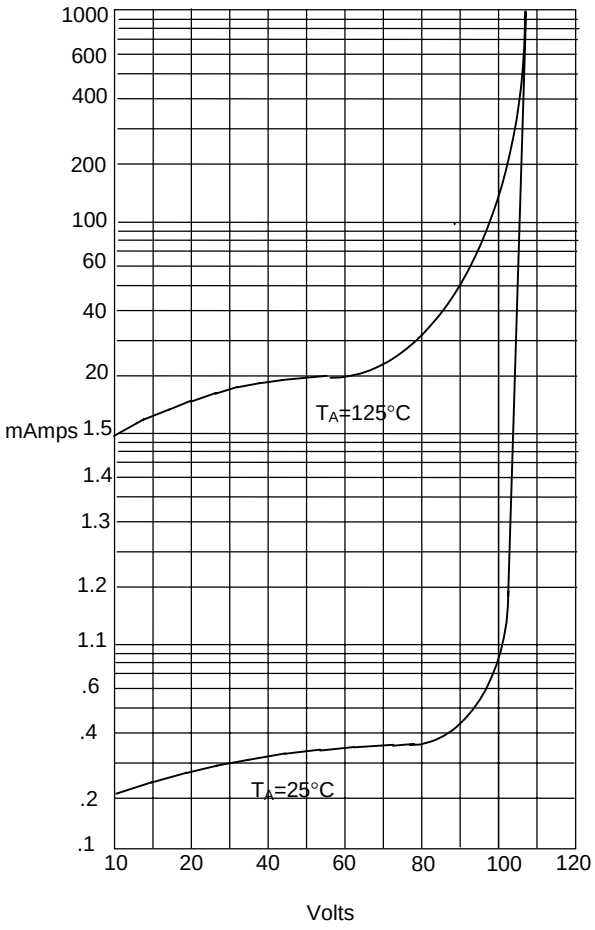

Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



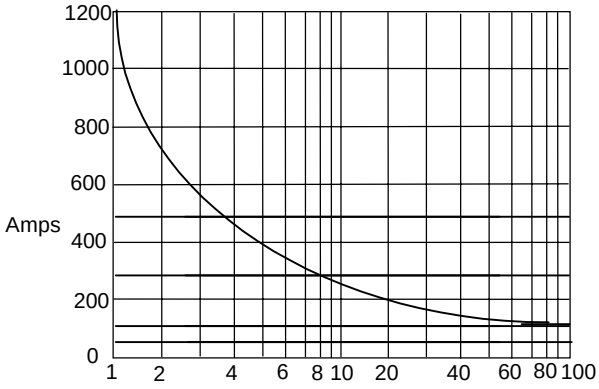

Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics




Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current




Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles